Common Name (Park-specific): Cattail Marsh

SYNONYMS

NVC English Name: **(Narrowleaf Cattail, Broadleaf Cattail) - (Clubrush species) Eastern Herbaceous Vegetation**

NVC Scientific Name: ***Typha (angustifolia, latifolia) - (Schoenoplectus spp.)*** **Eastern Herbaceous Vegetation**

NVC Identifier: **CEGL006153**

LOCAL INFORMATION

Environmental Description: This association is found in low-lying areas of Johnstown Flood National Memorial in very poorly drained muck soils. These areas hold standing water for most of the growing season.

Vegetation Description: This association is predominantly composed of hydrophytic species that form a thick herbaceous layer covering approximately 85% of the area. Broadleaf cattail (*Typha latifolia*), rice cutgrass (*Leersia oryzoides*), jewelweed (*Impatiens capensis*), and swamp verbena (*Verbena hastata*) are the dominant species. Other common associates include common rush (*Juncus effusus*), wool grass (*Scirpus cyperinus*), Allegheny monkeyflower (*Mimulus ringens*), watercress (*Rorippa nasturtium-aquaticum*), and climbing nightshade (*Solanum dulcamara*).

Most Abundant Species:

Stratum	Lifeform	Species
Herb (field)	Graminoid	*Leersia oryzoides*
Herb (field)	Forb	*Typha latifolia, Impatiens capensis, Verbena hastata*

Characteristic Species: *Typha latifolia, Leersia oryzoides, Verbena hastata, Scirpus cyperinus, Mimulus ringens.*

Other Noteworthy Species: Information not available.

Local Range: This association occurs in the former lakebed, most prominently on the northeast side of the railroad berm, and in small patches in the old field vegetation on the river's west shore.

Classification Comments: This vegetation type is distinguished by the dominance of *Typha latifolia* and the presence of other hydrophyllic species.

Other Comments: None.

Local Description Authors: S.J. Perles (PNHP).

Plots: JOFL.4.

GLOBAL INFORMATION

NVC CLASSIFICATION

Physiognomic Class	Herbaceous Vegetation (V)
Physiognomic Subclass	Perennial graminoid vegetation (V.A.)
Physiognomic Group	Temperate or subpolar grassland (V.A.5.)
Physiognomic Subgroup	Natural/Semi-natural temperate or subpolar grassland (V.A.5.N.)
Formation	Semipermanently flooded temperate or subpolar grassland (V.A.5.N.l.)
Alliance	*Typha (angustifolia, latifolia)* - *(Schoenoplectus* spp.) Semipermanently Flooded Herbaceous (A.1436) Alliance
Alliance (English name)	(Narrowleaf Cattail, Broadleaf Cattail) - (Clubrush species) Semipermanently Flooded Herbaceous Alliance
Association	*Typha (angustifolia, latifolia)* - *(Schoenoplectus* spp.) Eastern Herbaceous Vegetation
Association (English name)	(Narrowleaf Cattail, Broadleaf Cattail) - (Clubrush species) Eastern Herbaceous Vegetation
Ecological System(s):	Laurentian-Acadian Freshwater Marsh (CES201.594)

GLOBAL DESCRIPTION

Concept Summary: These tall emergent marshes are common throughout the northeastern United States and adjacent Canadian provinces. They occur in permanently flooded basins, often part of a larger wetland mosaic and associated with lakes, ponds, or slow-moving streams. The substrate is muck over mineral soil. Lacustrine cattail marshes typically have a muck-bottom zone bordering the shoreline, where cattails are rooted in the bottom substrate, and a floating mat zone, where the roots grow suspended in a buoyant peaty mat. Tall graminoids dominate the vegetation; scattered shrubs are often present (usually totaling less than 25% cover), and are frequently shorter than the graminoids. Trees are absent. Bryophyte cover varies, and is rarely extensive; bryophytes are mostly confined to the hummocks. *Typha angustifolia, Typha latifolia*, or their hybrid *Typha X glauca* dominate, either alone or in combination with other tall emergent marsh species. Associated species vary widely; sedges such as *Carex aquatilis, Carex lurida, Carex rostrata, Carex pellita, Scirpus cyperinus*, and bulrushes such as *Schoenoplectus americanus* and *Schoenoplectus acutus* occur, along with patchy grasses such as *Calamagrostis canadensis*. Broad-leaved herbs include *Thelypteris palustris, Asclepias incarnata, Calla palustris, Impatiens capensis, Sagittaria latifolia, Scutellaria lateriflora, Sparganium eurycarpum*, and *Verbena hastata*. Floating aquatics, such as *Lemna minor*, may be common in deeper zones. Shrub species vary across the geographic range of this type; in the northern part of its range, *Myrica gale*, *Ilex verticillata*, and *Spiraea alba* are common. The invasive exotic plants *Lythrum salicaria* and *Phragmites australis* may be abundant in parts of some occurrences. This association is distinguished from other northeastern freshwater marshes by the strong dominance of *Typha* spp.

Environmental Description: These tall emergent marshes are common throughout the northeastern United States and adjacent Canadian provinces. They occur in permanently flooded basins, often as part of a larger wetland mosaic and associated with lakes, ponds, or slow-moving streams. The substrate is muck over mineral soil. Lacustrine cattail marshes typically have a muck-bottom zone bordering the shoreline, where cattails are rooted in the bottom substrate, and

a floating mat zone, where the roots grow suspended in a buoyant peaty mat. This association is often found in impounded waters.
Vegetation Description: Tall graminoids dominate the vegetation; scattered shrubs are often present (usually totaling less than 25% cover) and are frequently shorter than the graminoids. Trees are absent. Bryophyte cover varies and is rarely extensive; bryophytes are mostly confined to the hummocks. *Typha angustifolia, Typha latifolia,* or their hybrid *Typha X glauca* dominate, either alone or in combination with other tall emergent marsh species. Associated species vary widely; sedges such as *Carex aquatilis, Carex lurida, Carex rostrata, Carex pellita, Scirpus cyperinus,* and bulrushes such as *Schoenoplectus americanus* and *Schoenoplectus acutus* occur, along with patchy grasses such as *Calamagrostis canadensis*. Broad-leaved herbs include *Thelypteris palustris, Asclepias incarnata, Calla palustris, Impatiens capensis, Sagittaria latifolia, Scutellaria lateriflora, Sparganium eurycarpum,* and *Verbena hastata*. Floating aquatics such as *Lemna minor* may be common in deeper zones. Shrub species vary across the geographic range of this type; in the northern part of its range, *Myrica gale, Ilex verticillata,* and *Spiraea alba* are common. The invasive exotic plants *Lythrum salicaria* and *Phragmites australis* may be abundant in parts of some occurrences.
Most Abundant Species: Information not available.
Characteristic Species: Information not available.
Other Noteworthy Species: Information not available.
USFWS Wetland System: Palustrine.

DISTRIBUTION
Range: Information not available.
States/Provinces: CT, DE, MA, MD, ME:S5, NC, NH:S4?, NJ:S5, NY, PA, RI, VA, VT, WV.
Federal Lands: NPS (Acadia, Blue Ridge Parkway?, Cape Cod, Johnstown Flood); USFWS (Great Swamp).

CONSERVATION STATUS
Rank: G5 (1-Dec-1997).
Reasons: Information not available.

CLASSIFICATION INFORMATION
Status: Standard.
Confidence: 3 – Weak.
Comments: *Typha angustifolia* can grow in deeper water compared to *Typha latifolia*, although both species reach maximum growth at a water depth of 50 cm (Grace and Wetzel 1981). *Typha* often occurs in pure stands and can colonize areas recently exposed by either natural or human causes.
Similar Associations:
Typha latifolia Southern Herbaceous Vegetation (CEGL004150)
Typha spp. - *Schoenoplectus acutus* - Mixed Herbs Midwest Herbaceous Vegetation (CEGL002229)
Typha spp. - *Schoenoplectus tabernaemontani* - Mixed Herbs Southern Great Lakes Shore Herbaceous Vegetation (CEGL005112)
Typha spp. Midwest Herbaceous Vegetation (CEGL002233)

Related Concepts:
Cattail Marsh (Thompson 1996) ?
Cattail Marsh (CAP pers. comm. 1998) ?
Palustrine Narrow-leaved Persistent Emergent Wetland, Permanently Flooded (PEM5H) (Cowardin et al. 1979) ?
Robust Emergent Marsh (Breden 1989) ? Southern New England nutrient-poor streamside/lakeside marsh (Rawinski 1984) ?
Southern New England nutrient-rich streamside/lakeside marsh (Rawinski 1984) ?

SOURCES
Description Authors: S.C. Gawler.
References: Breden 1989, Breden et al. 2001, CAP pers. comm. 1998, Cowardin et al. 1979, Eastern Ecology Working Group n.d., Edinger et al. 2002, Fike 1999, Gawler 2002, Grace and Wetzel 1981, Metzler and Barrett 2001, Northern Appalachian Ecology Working Group 2000, Rawinski 1984, Sperduto 2000b, Swain and Kearsley 2001, Thompson 1996, Thompson and Sorenson 2000.

Figure 16. Cattail Marsh at Johnstown Flood National Memorial (plot JOFL.4). July 2004. NAD 1983 / UTM easting 689131, northing 4468635.